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Pravednekow

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[54] **UTILITY DEVICE**

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[52] **U.S. Cl.** **280/47.24**, 37/130

[51] **Int. Cl.** **B62b 1/12**

[58] **Field of Search** 280/47.24, 47.26; 294/59; 37/130

[56] **References Cited**

UNITED STATES PATENTS

1,015,969	1/1912	McCray	280/47.26 X
3,248,811	5/1966	Pravednekow	37/130 X
861,308	7/1907	McMann	280/47.26 X
2,598,952	6/1952	Weingart	280/47.24 X
2,895,238	7/1959	Long	280/47.26 X
3,017,710	1/1962	Carlson	280/47.26 X

FOREIGN PATENTS OR APPLICATIONS

645,226	7/1962	Canada	280/47.24

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[57] **ABSTRACT**

A utility device for moving loads having a load bearing platform including load shifting means in the form of a curved surface built into the top of the platform, in combination with platform fulcrum means for pivoting the surface including the load shifting means, together with fulcrum arm handle means to assist in pivoting the load bearing surface and in shifting the load borne on said surface.

8 Claims, 7 Drawing Figures

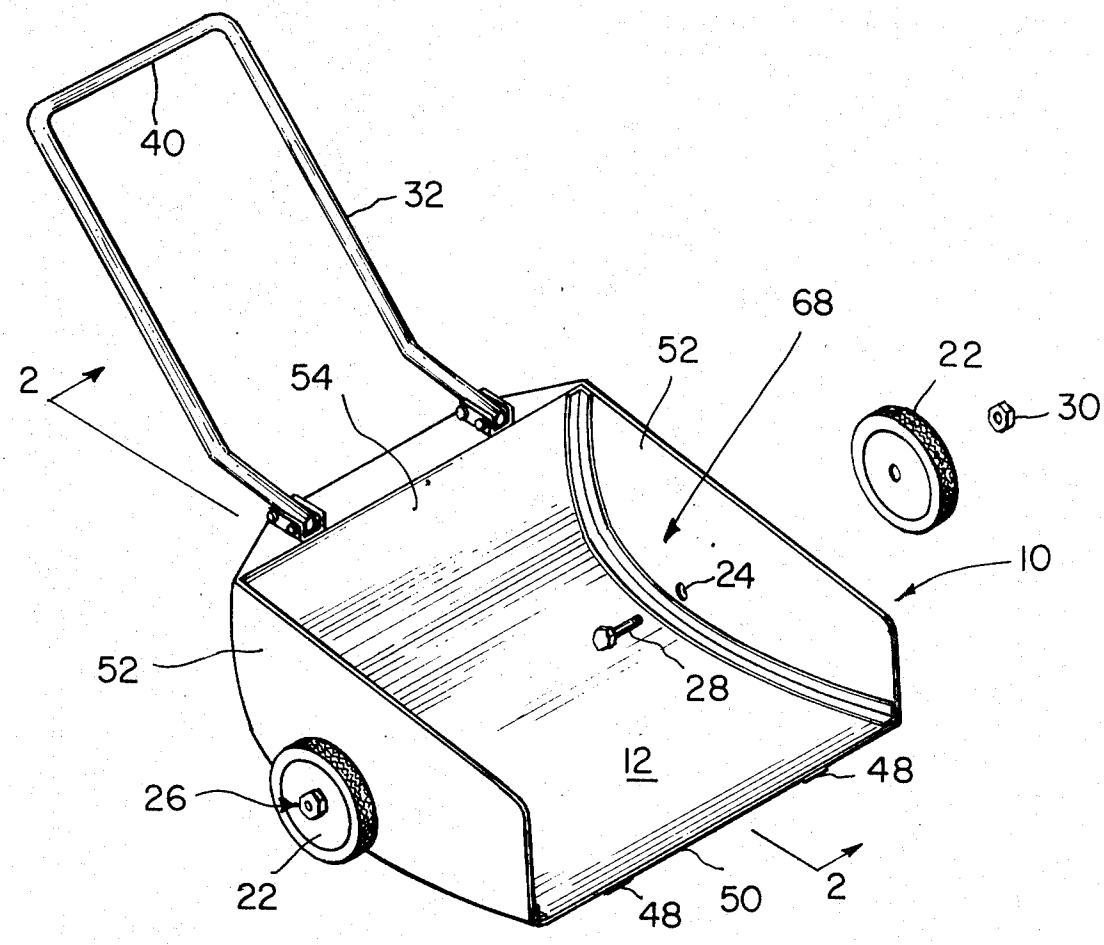
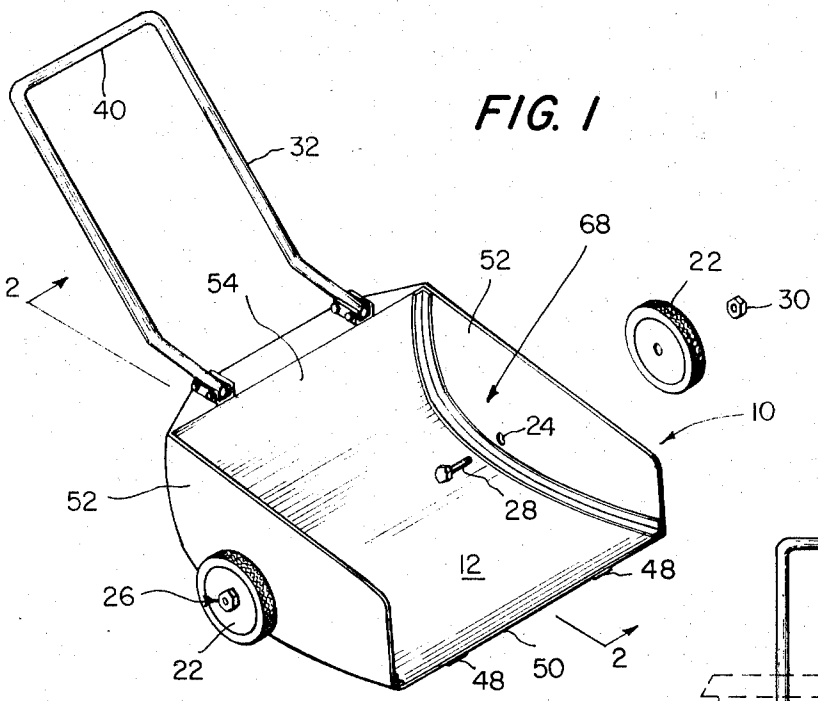


FIG. 1



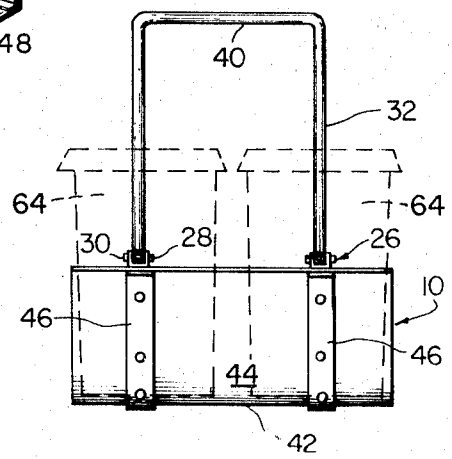


FIG. 3

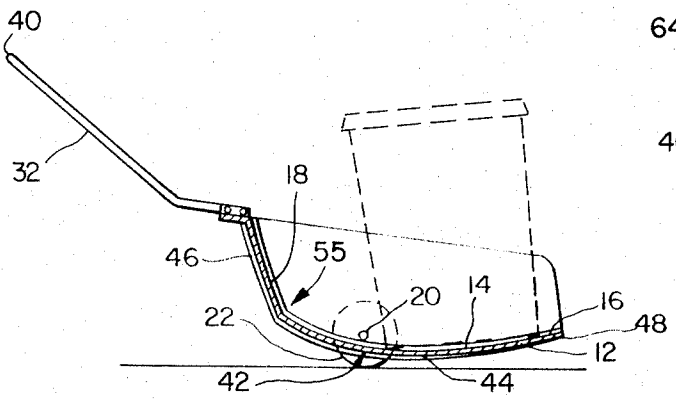


FIG. 2

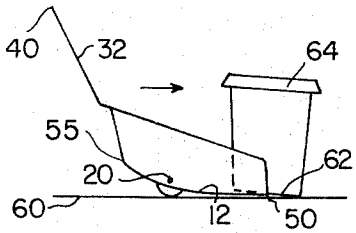


FIG. 4

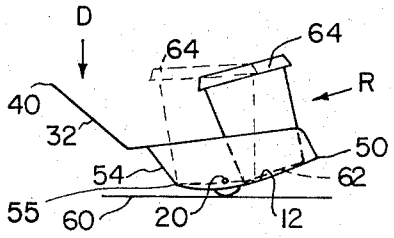


FIG. 5

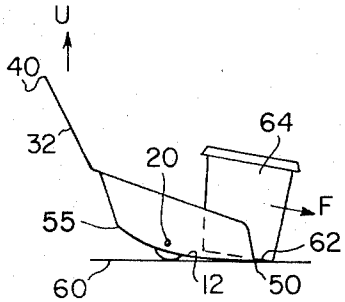


FIG. 6

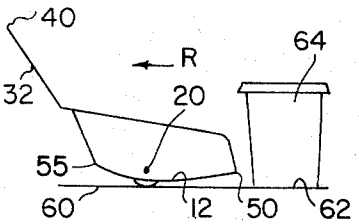


FIG. 7

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UTILITY DEVICE

This invention relates to utility devices similar to scoops or wheelbarrows for moving loads. The main body portion of the device includes a curved upper platform having a fulcrum means and fulcrum arm handle means so that the curved platform and the fulcrum arm handle means will be positioned on opposite sides of the fulcrum means to permit the entire device to be used as a lever in lifting loads and in shifting the loads from an outer edge of the main body portion toward the portion of the main body associated with the fulcrum means, and thereby permit handling of heavy loads with relative ease. The fulcrum means may be in the form of a pair of wheels which may be demountable thereby shifting the fulcrum means of the device to the bottom of the body portion underneath the wheel mounts.

Thus, a device is provided which may be used on dry ground with the wheels, and which also may be used on slippery surfaces such as muddy surfaces or snow covered ground with the wheels demounted in much the same manner.

It is an object of this invention to provide such a device which may be used to lift and carry loads.

It is a further object of this invention to provide such a device which, in particular, will be suitable for moving utility cans such as garbage cans, and which will also be suitable for snow removal purposes.

Further objects and advantages will appear in the specification hereinbelow. The invention is illustrated in the accompanying drawings in which:

FIG. 1 is a perspective view with parts exploded;

FIG. 2 is a sectional view along the lines 2—2 in FIG. 1 with parts in phantom;

FIG. 3 is a rear elevation with the wheels demounted; and

FIGS. 4 through 7 inclusive are a series of end views showing the device in various positions for loading and unloading a utility can such as a garbage can.

Similar numerals refer to similar parts throughout the several views.

The main body portion **10** may be made of steel or other metal, or any material such as a plastic material which will be strong enough to withstand the use to which the utility device is put.

The body portion **10** has a bottom portion **12** including an upper surface **14** defining a cross sectional curve comprising a forward arm **16** and a rearward arm **18** on either side of a fulcrum area **10.** The fulcrum area includes at least one demountable wheel **22.** In the preferred form of the invention, there are a pair of demountable wheels **22** which may be mounted to the body portion **10** through shaft bearings **24** by means of shaft means **26** comprising bolt means **28** and nut fastening means **30.** The body portion is provided with handle means **32** which form an extension of the arm means **18** so that the handle means **32** are associated with the fulcrum area **20.**

Thus, viewing FIG. 2 of the drawings, there is shown a fulcrum area **20** having arm means **16** as a lever arm extending to the right of the figure, and arm means **18** and handle means **32** extending as a lever arm to the left portion of the figure, both arms **16** and **18** plus handle means **32** being associated with the fulcrum means **20** so that an operator, by grasping the end **40** of handle means **32,** can rotate or rock the entire device around the fulcrum area **20** as shown in FIGS. **4** through **7** of the drawings.

A feature of the invention is the provision of a fulcrum area means **20** which provides for rotation on the axis formed by the shaft means **26** as well as a fulcrum area means **42** which is located along the curve of the bottom **44** of the device and along which the device can be rocked when the wheels **22** are demounted. Thus, when the wheels **22** are mounted, the fulcrum area is defined by the axis of the shaft means **26** and when the wheels are demounted, the fulcrum area is defined by the curved portion **42** of the bottom **44** generally beneath the shaft bearings **24.** In any case, the action of the device during operation is centered around a fulcrum area either **20** or **42,** depending on whether the wheels **22** are mounted or demounted.

Skid or runner means **46** are provided to strengthen the body portion of the device, and also to permit easier operation when the wheels **22** are demounted. The skid means such as runners **46** will act in much the same manner as sleigh runners over a snowy type surface.

The fronts **48** of the runners **46** may be tapered so that the device is provided with a straight thin leading edge **50.** The device is also provided with sides **52** and a sharply upcurved portion **54** which may serve as a backstop means.

The device may be operated as shown in FIGS. **4** through **7** of the drawings. An operator grasps the handlebar **40** of the handle means **32** and rolls the device forward in the direction of the arrow shown in FIG. **4,** guiding the leading edge **50** along the level of floor **60** so that leading edge **50** will glide between the bottom **62** of an item such as a garbage can **64** and the floor **60.** After leading edge **50** has glided a sufficient distance forward underneath can **64** to insure that can **64** will be lifted by platform **12,** the operator bears down on handlebars **40** in the direction of arrow D in FIG. **5.** This rotates the entire device on fulcrum area **20** and provides that the curve on upper part of platform **12** assumes a slope position. Force of gravity will then move can **64** along the upper surface of platform **12** in the direction of arrow R until it assumes the position of the can depicted in dotted lines against the corner **55** formed by backstop **54.** This movement can be assisted by a sharp forward push on handlebars **40.** The device is now loaded with the can **64** which may then be transported to any desired place by rolling the device over the floor or other surface.

The device is unloaded when the operator raises handlebar **40** in the direction of arrow U (FIG. **6**) as he pushes it forward in the direction of arrow F, with leading edge **50** lowered toward floor **60.** When the operator, still grasping handlebars **40,** reduces the speed of, or stops, the forward motion of the device, the can **64** will continue to move forward and slide off the front of leading edge **50.** At this point the operator can move the entire device rearward in the direction of arrow R in FIG. **7** completely unloading the device.

It can be appreciated that the use of the device permits the operator various degrees of mechanical advantage in lifting and transporting loads, and the operator also has the advantage of the wheels of the device in transporting the loads. The mechanical advantage for lifting and unloading is provided by the lever arrangement of the components of the device around the fulcrum area **20.** That portion of platform **12** between the

fulcrum area and leading edge **50** serves as one arm of the lever arrangement, and that portion of platform **12** between fulcrum area **20** and trailing edge **56** of the device, together with the handle means **32,** forms another arm of the lever system.

When the wheels **22** are demounted and the device is moved by sliding it over a surface such as snow, the fulcrum area means **20** formerly provided at the shaft positions **26** moves down to the bottom of the device and becomes fulcrum area **42.** Since the device can be rocked over a snowy surface, the same lever effect obtained when the wheels are mounted can be obtained when the wheels are demounted. The device can then be moved over the snowy surface on the runners **46** in the same manner as a sleigh or sled is moved. The same operation of lifting and moving a utility can or the like, such as a garbage can **64,** can be done with the wheels demounted. In addition, the device can be used for snow removal since the platform **12** and the sides **52** together with backstop **54** form a scoop means **68.** Scoop means **68** can be utilized with the wheels mounted or demounted. For example, snow removal can be accomplished with the wheels demounted. Moving quantities of loose material such as grain or gravel can be accomplished by using the scoop means **68** with the wheels mounted.

In FIG. **3** a pair of cans **64** are shown in side by side relationship in combination with the utility device. The device may be sized to carry and move two or more utility cans, or the like, such as garbage cans **64.** A pair or more of such cans **64** in side by side relationship can be picked up and moved in the same manner of operation as described hereinabove.

While I have described my invention in its preferred form, there are other forms which it may take coming within the claims hereinbelow without departing from the spirit and scope of the invention, and I, therefore, desire to be protected for all such forms.

Wherefore I claim:

1. A utility device for moving loads, comprising a main body portion comprising a platform with load shifting means, shiftable fulcrum area means including at least one demountable roller means, and at least a portion of the bottom of the main body portion, forward fulcrum arm means adjacent said fulcrum area means, rearward fulcrum arm means adjacent said fulcrum area means, backstop means, and handle means extending rearwardly of said rearward fulcrum arm means; in which the load shifting means of the platform is comprised in an upper side of a continuously curved platform surface which forms at least part of each of said fulcrum arm means and the backstop means comprises a corner with said platform surface located within said rearward fulcrum arm means.

2. The utility device as claimed in claim **1,** which further comprises a leading edge, said curve of said platform extending outwardly in forward and rearward directions from, and upwardly with relation to, said shiftable fulcrum area means to provide slope with relation to said forward and rearward fulcrum arm means.

3. The utility device as claimed in claim **2,** in which the demountable roller means is a pair of demountable wheels mounted on shaft means and in which the fulcrum area means shifts from said shaft means when the wheels are mounted, to a fulcrum area means at the bottom of the main body portion when the wheels are demounted.

4. The utility device as claimed in claim **3,** in which the main body portion has a lower surface curved to correspond generally with the curved upper surface of said load shifting platform surface.

5. The utility device as claimed in claim **2** which further comprises skid means on the lower surface portion thereof.

6. The utility device as claimed in claim **5** in combination with at least one associated utility container adapted to be accommodated on the load shifting platform of the utility device.

7. The combination as claimed in claim **6,** in which the utility container is a garbage can adapted to slide in forward and rearward directions along the load shifting platform when the utility device is moved and rotated at the shiftable fulcrum area means by operating the handle means thereof.

8. The combination as claimed in claim **7** comprising a plurality of garbage cans adapted to fit in side by side relationship on said platform.

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